

## **REMARKS**

Claims 1-14 were pending when last examined. Claims 1-5, and 7-13 stand rejected. Claims 6 and 14 were objected. Claims 1, 8, 9, and 11 are amended through this response. Claims 8 and 9 are amended to correct typographical errors. Claim 15 is added. Applicants respectfully request reconsideration of claims 1-14 and allowance of Claims 1-15.

### **Response to Claim Rejections under 35 U.S.C. §103**

Claims 1-5, 7-11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US Patent: 7,030,846) in view of Stokes et al. (US Patent 6,628,828), further in view of Moon et al. (US Patent 6,762,742).

**For Claim 1:** Claim 1 is patentable over Lee in view of Stokes and further in view of Moon because the combination of these three references does not teach all of the limitations in Claim 1.

First of all, the combination of Lee, Stokes and Moon does not teach

a gamma converter converting input image data into output image data that have gamma characteristic adapted to a gamma 2.2 curve and have a bit number greater than the input image data,

a color correction unit including color correction coefficients for performing color correction on the image data from the gamma converter, the color correction coefficients determined depending on color represented by the liquid crystal display.

The Examiner admits that “Lee does not explicitly teach including a gamma converter outputting output image data based on the input image data...” and relied on Stokes to disclose the gamma converter. Specifically, page 4 of the Office Action indicates that Stokes’ gamma correction 104 corresponds to the “gamma converter” of Claim 1, citing to Stokes’

column 7, lines 20-21. However, nothing in this cited section teaches or suggests that Stokes' gamma correction 104 "[has] a bit number greater than the input image data" (emphasis added). The cited section talks about converting the color object from a space that has a gamma of 1.0 to the space that has a gamma of 2.2, which does not relate to bit number expansion. Stokes does not disclose the image data inputted into the gamma converter 104 having a bit number smaller than the image data outputted from the gamma converter 104. It should also be noted that Stokes relates to user software or hardware used for converting images, and does not disclose a color correction method adapted to the characteristics of a display device.

Furthermore, the Examiner states that Lee discloses "a signal controller with a bit number smaller than the output image data." Page 3 of the Office Action indicates that the Examiner reads Lee's R, G, and B data corrections units (112, 114, 116) as corresponding to "the color correction unit" of Claim 1. Page 3 of the Office Action also indicates that the Examiner reads Lee's timing control unit 100 as corresponding to "the signal controller" of Claim 1, and states that the signal controller discloses bit number expansion. However, the signal controller (100) in Lee does not actually output signals that have different bit numbers from the input data. As shown in Fig. 8 of Lee, the bit numbers of both the input and output signals from the signal controller (100) and the color correction unit (110) are 8 bits. The data correction units (112, 114, and 116) in Lee output signals that have different bit numbers from the input signal. However, according to the Examiner's reading, the data correction units correspond to the color correction unit as recited in Claim 1, and not the gamma converter. Since bit number changing is not recited in connection to the color correction unit and Lee does not disclose a gamma converter, Lee does not cure Stokes' failure to disclose "a gamma

converter converting input image data into output image data that have ... a bit number greater than the input image data.”

Additionally, the combination of Lee, Stokes, and Moon also does not disclose

a voltage generator generating a plurality of gray voltages by dividing a predetermined voltage lower than a supply voltage such that the predetermined voltage gives a luminance of about 80  $\text{cd/m}^2$ .

a data driver receiving the gray voltages from the voltage generator, and selecting data voltage among the gray voltages corresponding to the image data from the signal controller, and outputting the data voltage to the liquid crystal panel assembly.

With regard to the voltage generator, the examiner opined that Lee discloses

a voltage generator generating a plurality of gray voltages by dividing a predetermined voltage lower than a supply voltage (i.e. data driver is able to output selected voltage that are generated at the voltage generator, which include Von, Voff, and Vcom) (see Fig. 7, Col. 7, Lines 33-45);

a data driver selecting the gray voltages from the voltage generator and outputting gray voltages corresponding to the image data from the signal controller (i.e. data driver is able to output select voltages that are generated at the voltage generator; which include Von, Voff, and Vcom) (See Fig. 7, Col. 7, Lines 33-45).

However, in Lee, the voltages Von, Voff and Vcom are supplied to a scan driver (300) instead of the data driver (200) as the Examiner suggests. (See, for example Lee col. 7, lines 38-45 “The scan driver 300 receives ... voltages Von, Voff and Vcom (not shown) from a gate driving voltage generation unit (not shown) ...”) Lee also does not disclose a voltage generator dividing a predetermined voltage which is lower than the supply voltage.

Hence, Lee in view of Stokes and further in view of Moon does not disclose the gamma converter nor the voltage generator recited in Claim 1. Claim 1 is patentable over Lee

in combination of Stokes and Moon. Applicants respectfully request the 103 rejection to Claim 1 be withdrawn.

**For Claims 2-5 and 7-9:** Claims 2-5 and 7-9 depend from Claim 1 and are patentable at least for the reason of dependency on Claim 1. Applicants respectfully request the 103 rejections to Claims 2-5 and 7-9 be withdrawn.

**For Claim 11:** Independent Claim 11 is patentable over Lee in view of Stokes and further in view of Moon because it recites “generating a plurality of gray voltages by dividing a predetermined voltage lower than a supply voltage ....” As stated above in reference to Claim 1, Lee fails to disclose dividing a predetermined voltage lower than a supply voltage. On this basis, Applicants respectfully request the 103 rejection to Claim 11 be withdrawn.

**For Claim 12-13:** Claims 12-13 depend from Claim 11 and are patentable at least for the reason of dependency on Claim 11. Applicants respectfully request the 103 rejections to Claims 12-13 be withdrawn.

#### **Allowable Subject Matter**

Examiner states that “Claims 6 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.” The indicated allowability of Claims 6 and 14 is noted and appreciated. However, Applicants firmly believe that the Claims 1 and 11 are allowable, and Claims 6 and 14 are allowable in dependent forms for at least the reason of dependency on Claims 1 and 11 respectively. Applicants respectfully request Claims 6 and 14 be allowed in dependent forms.

New Claim

Newly submitted Claim 15 depends from Claim 2 and is therefore patentable at least for the reason of dependency on Claim 2. The subject matter recited in Claim 15 is fully supported by the specifications (see, for example, [0045]). Accordingly, no new matter is being added by Claim 15. Applicants respectfully request that Claim 15 be allowed.

CONCLUSION

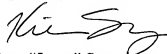
In light of the foregoing, Applicants respectfully request that all rejections be withdrawn and that all of the pending claims be allowed. Should any other action be contemplated by the Examiner, it is respectfully requested that he contact the undersigned at (408) 392-9250 to discuss the application.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on March 11, 2008.

  
Attorney for Applicant(s)

March 11, 2008  
Date of Signature

Respectfully submitted,



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